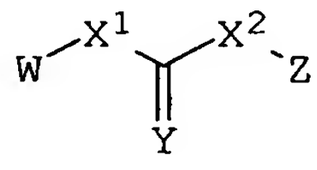
IN THE CLAIMS:

1. (Currently amended) A method of inhibiting checkpoint kinase 1 in a cell comprising a step of contacting the cell with ~~an~~ a therapeutically effective amount of a compound of formula



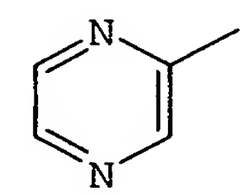
,

wherein X^1 is ~~null,~~ -O-, -S-, $-CH_2-$, or $-N(R^1)-$;

X^2 is -O-, -S-, or $-N(R^1)-$;

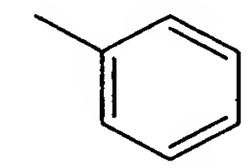
Y is O or S; ~~or =Y represents two hydrogen atoms attached to a common carbon atom;~~

W is ~~selected from the group consisting of heteroaryl, aryl, heterocycloalkyl, cycloalkyl, and C_{1-3} alkyl substituted with a heteroaryl or aryl group~~



;

Z is ~~selected from the group consisting of hydro, aryl, and heteroaryl~~



;

wherein ~~said aryl groups of W and~~ Z ~~are~~ is optionally substituted with one to four substituents represented by R^2, ~~said heteroaryl groups of~~ and W ~~and Z are~~ is optionally substituted with one to ~~four~~ three substituents represented by R^5~~, and said heterocycloalkyl and cycloalkyl groups of W are optionally substituted with one to two substituents represented by R^6~~;

R^1 is selected from the group consisting of hydro, C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, and aryl;

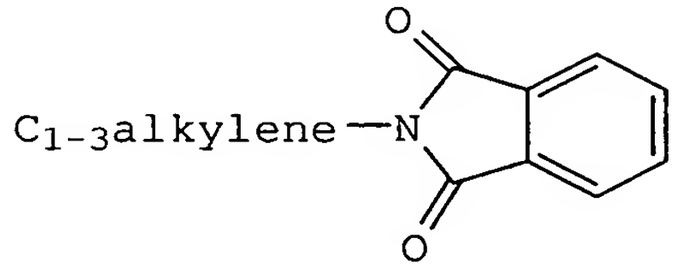
R^2 is selected from the group consisting of halo, optionally substituted C_{1-6}alkyl, C_{2-6}alkenyl, OCF_3, NO_2, CN, NC, $N(R^3)_2$, OR^3, CO_2R^3, $C(O)N(R^3)_2$, $C(O)R^3$, $N(R^1)COR^3$, $N(R^1)C(O)OR^3$, $N(R^3)C(O)OR^3$, $N(R^3)C(O)C_{1-3}$alkyleneC(O)R^3, $N(R^3)C(O)C_{1-3}$alkyleneC(O)OR^3, $N(R^3)C(O)$-C_{1-3}alkyleneOR^3, $N(R^3)C(O)C_{1-3}$alkyleneNHC(O)OR^3, $N(R^3)$-$C(O)C_{1-3}$alkyleneSO_2NR^3, C_{1-3}alkyleneOR^3, and SR^3;

R^3 is selected from the group consisting of hydro, C_{1-6}alkyl, C_{2-6}alkenyl, cycloalkyl, aryl, heteroaryl, SO_2R^4, C_{1-6}alkyl substituted with one or more of halo, hydroxy, aryl, heteroaryl, heterocycloalkyl, $N(R^4)_2$, and SO_2R^4, C_{1-3}alkylenearyl, C_{1-3}alkyleneheteroaryl, C_{1-3}alkyleneC_{3-8}heterocycloalkyl, C_{1-3}alkylene-SO_2aryl, optionally substituted C_{1-3}alkyleneN$(R^4)_2$, OCF_3, C_{1-3}alkyleneN$(R^4)_3^+$, C_{3-8}heterocycloalkyl, and CH(C_{1-3}alkylene$N(R^4)_2)_2$, or two R^3 groups are taken together to form an optionally substituted 3- to 6-membered aliphatic ring;

R^4 is selected from the group consisting of hydro, C_{1-6}alkyl, cycloalkyl, aryl, heteroaryl, C_{1-3}alkylenearyl, and SO_2C_{1-6}alkyl, or two R^4 groups are taken

together to form an optionally substituted 3- to 6-membered ring;

R^5 is selected from the group consisting of C_{1-6}alkyl, aryl, $N(R^3)_2$, OR^3, halo, N_3, CN, C_{1-3}alkyl-enearyl, C_{1-3}alkyleneN$(R^3)_2$, $C(O)R^3$, and



;

~~R^6 is selected from the group consisting of halo and C_{1-6}alkyl;~~

~~and~~ or pharmaceutically acceptable salts, or prodrugs, or solvates thereof.

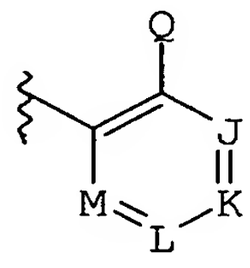
2. (Currently amended) The method of claim 1 wherein

X^1 and X^2 are -N(H)-;

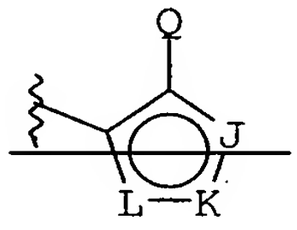
Y is O or S;

W is ~~heteroaryl containing at least two heteroatoms selected from the group consisting of N, O, and S, said ring is~~ optionally substituted with from one to ~~four~~ three substituents selected from the group consisting of C_{1-6}alkyl, aryl, $N(R^3)_2$, OR^3, and halo;

Z is ~~selected from the group consisting of~~



~~and~~



wherein Q is selected from the group consisting of hydro, OR^3, SR^3, and $N(R^3)_2$;

J is ~~selected from the group consisting of~~ CR^{20}~~, NR^{20}, O, and S~~;

K is ~~selected from the group consisting of~~ CR^{21}~~, NR^{21}, O, and S~~;

L is ~~selected from the group consisting of~~ CR^{22}~~, NR^{22}, O, and S~~;

M is ~~selected from the group consisting of~~ CR^{23}~~, NR^{23}, O, and S~~;

wherein:

R^{20}, R^{21}, and R_{22} are each independently selected from the group consisting of ~~null,~~ hydro, halo, optionally substituted C_{1-6}alkyl, C_{2-6}alkenyl, OCF_3, NO_2, CN, NC, $N(R^{25})_2$, OR^{25}, CO_2R^{25}, $C(O)N(R^{25})_2$,

$C(O)R^{25}$, $N(R^{24})COR^{25}$, $N(R^{24})C(O)OR^{25}$, $N(R^{25})C(O)OR^{25}$, $N(R^{25})C(O)C_{1-3}alkyleneC(O)R^{25}$, $N(R^{25})C(O)C_{1-3}alkylene-C(O)OR^{25}$, $N(R^{25})C(O)C_{1-3}alkyleneOR^{25}$, $N(R^{25})C(O)C_{1-3}alkyleneNHC(O)OR^{25}$, $N(R^{25})C(O)C_{1-3}alkyleneSO2NR^{25}$, CF_3, $C_{1-3}alkyleneN(R^{25})SO_2aryl$, $C_{1-3}alkyleneN(R^{25})SO_2heteroaryl$, $C_{1-3}alkyleneOC_{1-3}alkylenearyl$, $C_{1-3}alkyleneN(R^{25})C_{1-3}alkylenearyl$, $C_{1-3}alkyleneN(R^{25})C_{1-3}alkyleneheteroaryl$, $C_{1-3}alkyleneN(R^{25})C(O)R^7$, $C_{1-3}alkyleneN(R^{25})C(O)C_{1-3}alkyleneOR^{25}$, $C_{1-3}alkyleneN(R^{25})C(O)aryl$, $C_{1-3}alkyleneN(R^{25})C(O)C_{1-3}alkyleneN(R^{25})_2$, $C_{1-3}alkyleneN(R^{25})C(O)heteroaryl$, $C_{1-3}alkyleneOR^{25}$, and SR^{25};

R^{23} is selected from the group consisting of ~~null,~~ hydro, optionally substituted $C_{1-6}alkyl$, and halo;

R^{24} is selected from the group consisting of hydro, $C_{1-6}alkyl$, $C_{2-6}alkenyl$, $C_{2-6}alkynyl$, and aryl;

R^{25} is selected from the group consisting of hydro, $C_{1-6}alkyl$, $C_{2-6}alkenyl$, cycloalkyl, heterocycle, aryl, heteroaryl, SO_2R^{26}, and $C_{1-6}alkyl$ substituted with halo, hydroxy, aryl, heteroaryl, heterocycloalkyl, $N(R^{26})_2$, or SO_2R^{26}; and

R^{26} is selected from the group consisting of hydro, $C_{1-6}alkyl$, cycloalkyl, aryl, and $SO_2C_{1-6}alkyl$, or two R^4 groups are taken together to form an optionally substituted 3- to 6-membered ring.

3. (Currently amended) The method of claim 2 wherein W is ~~selected from the group consisting of pyridazinyl, pyrimidinyl, pyrazinyl, and triazinyl,~~ optionally substituted with from one to ~~four~~ three substituents selected from the group consisting of optionally substituted $C_{1-6}alkyl$, aryl, $N(R^3)_2$, OR^3, and halo.

4. (Cancelled)

5. (Currently amended) The method of claim 2 wherein

J is ~~selected from the group consisting of~~ CR^{20} ~~and NR^{20}~~, wherein R^{20} is ~~null,~~ selected from the group consisting of hydro, optionally substituted C_{1-6}alkyl, and halo;

K is ~~selected from the group consisting of~~ CR^{21} ~~and NR^{21}~~; and

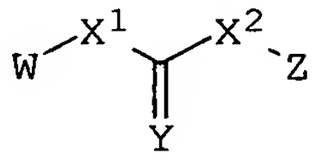
L is ~~selected from the group consisting of~~ CR^{22} ~~and NR^{22}~~; and

one of R^{21} and R^{22} is hydro and the other is a substituent selected from the group consisting of CO_2R^{25}, $C(O)N(R^{25})_2$, $C(O)R^{25}$, $N(R^{24})COR^{25}$, $N(R^{24})C(O)OR^{25}$, $N(R^{25})C(O)OR^{25}$, $N(R^{25})C(O)C_{1-3}alkyleneC(O)R^{25}$, $N(R^{25})$-$C(O)C_{1-3}alkyleneC(O)OR^{25}$, $N(R^{25})C(O)C_{1-3}alkyleneOR^{25}$, $N(R^{25})C(O)C_{1-3}alkyleneNHC(O)OR^{25}$, $N(R^{25})C(O)C_{1-3}alkyl$-$eneSO_2NR^{25}$, CF_3, $C_{1-3}alkyleneN(R^{25})SO_2aryl$, $C_{1-3}alkyl$-$eneN(R^{25})SO_2heteroaryl$, $C_{1-3}alkyleneOC_{1-3}alkylenearyl$, $C_{1-3}alkyleneN(R^{25})C_{1-3}alkylenearyl$, $C_{1-3}alkyleneN(R^{25})$-$C_{1-3}alkyleneheteroaryl$, $C_{1-3}alkyleneN(R^{25})C(O)R^7$, $C_{1-3}alkyleneN(R^{25})C(O)C_{1-3}alkyleneOR_2$, $C_{1-3}alkylene$-$N(R^{25})C(O)aryl$, $C_{1-3}alkyleneN(R^{25})C(O)C_{1-3}alkyleneN(R^{25})_2$, $C_{1-3}alkyleneN(R^{25})C(O)heteroaryl$, $C_{1-3}alkyleneOR^{25}$, and SR^{25}.

6. (Cancelled)

7. (Cancelled)

8. (Currently amended) A method of sensitizing cells in an individual undergoing a chemotherapeutic or radiotherapeutic treatment for a medical condition, comprising administering a therapeutically effective amount of a compound of formula (I) in combination with a therapeutically effective amount of a chemotherapeutic agent, a radiotherapeutic agent, or a mixture thereof to the individual, said compound of formula (I) having a structure

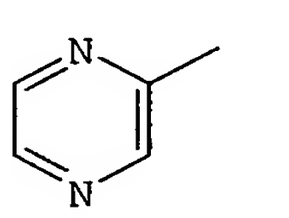


wherein X^1 is ~~null,~~ -O-, -S-, $-CH_2-$, or -$N(R^1)$-;

X^2 is -O-, -S-, or -$N(R^1)$-;

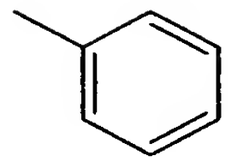
Y is O or S; ~~or =Y represents two hydrogen atoms attached to a common carbon atom;~~

W is ~~selected from the group consisting of heteroaryl, aryl, heterocycloalkyl, cycloalkyl, and C_{1-3} alkyl substituted with a heteroaryl or aryl group~~



;

Z is ~~selected from the group consisting of hydro, aryl, and heteroaryl~~



wherein ~~said aryl groups of W and~~ Z ~~are~~ is optionally substituted with one to four substituents represented by R^2, ~~said heteroaryl groups of~~ and W ~~and Z~~ is are optionally substituted with one to ~~four~~ three substituents represented by R^5~~, and said heterocycloalkyl and cycloalkyl groups of W are optionally substituted with one to two substituents represented by R^6~~;

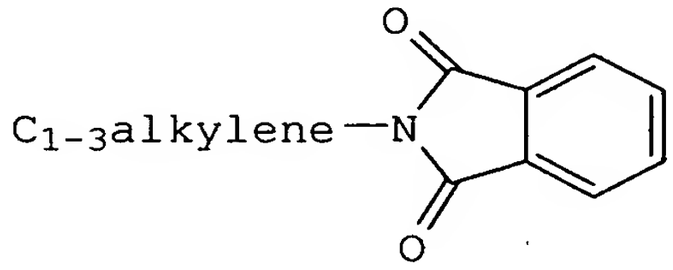
R^1 is selected from the group consisting of hydro, C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, and aryl;

R^2 is selected from the group consisting of halo, optionally substituted C_{1-6}alkyl, C_{2-6}alkenyl, OCF_3, NO_2, CN, NC, $N(R^3)_2$, OR^3, CO_2R^3, $C(O)N(R^3)_2$, $C(O)R^3$, $N(R^1)COR^3$, $N(R^1)C(O)OR^3$, $N(R^3)C(O)OR^3$, $N(R^3)C(O)C_{1-3}$alkyleneC(O)R^3, $N(R^3)C(O)C_{1-3}$alkyleneC(O)OR^3, $N(R^3)C(O)C_{1-3}$alkyleneOR^3, $N(R^3)C(O)C_{1-3}$alkyleneNHC(O)OR^3, $N(R^3)C(O)$-C_{1-3}alkyleneSO2NR^3, C_{1-3}alkyleneOR^3, and SR^3;

R^3 is selected from the group consisting of hydro, C_{1-6}alkyl, C_{2-6}alkenyl, cycloalkyl, aryl, heteroaryl, SO_2R^4, C_{1-6}alkyl substituted with one or more of halo, hydroxy, aryl, heteroaryl, heterocycloalkyl, $N(R^4)_2$, and SO_2R^4, C_{1-3}alkylenearyl, C_{1-3}alkyleneheteroaryl, C_{1-3}alkyleneC_{3-8}heterocycloalkyl, C_{1-3}alkylene-SO_2aryl, optionally substituted C_{1-3}alkylene$N(R^4)_2$, OCF^3, C_{1-3}alkylene$N(R^4)_3^+$, C_{3-8}heterocycloalkyl, and $CH(C_{1-3}$alkylene$N(R^4)_2)_2$, or two R^3 groups are taken together to form an optionally substituted 3- to 6-membered aliphatic ring;

R^4 is selected from the group consisting of hydro, C_{1-6}alkyl, cycloalkyl, aryl, heteroaryl, C_{1-3}alkylenearyl, and SO_2C_{1-6}alkyl, or two R^4 groups are taken together to form an optionally substituted 3- to 6-membered ring;

R^5 is selected from the group consisting of C_{1-6}alkyl, aryl, $N(R^3)_2$, OR^3, halo, N^3, CN, C_{1-3}alkylenearyl, C_{1-3}alkyleneN$(R^3)_2$, $C(O)R^3$, and



;

~~R^6 is selected from the group consisting of halo and C_{1-6}alkyl;~~

~~and~~ or pharmaceutically acceptable salts, or prodrugs, or solvates thereof.

9. (Currently amended) The method of claim 8 further comprising administering ~~one or more~~ a therapeutically effective amount of at least one of a cytokine, lymphokine, growth factor, or other hematopoietic factor.

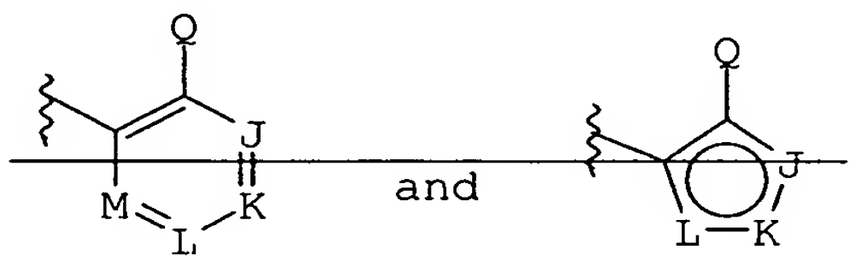
10. (Currently amended) The method of claim 8 wherein:

X^1 and X^2 are -N(H)-;

Y is O or S;

W is ~~heteroaryl containing at least two heteroatoms selected from the group consisting of N, O, and S, said ring is~~ optionally substituted with from one to ~~four~~ three substituents selected from the group consisting of C_{1-6}alkyl, aryl, $N(R^3)_2$, OR^3, and halo;

Z is ~~selected from the group consisting of:~~



;

wherein Q is selected from the group consisting of hydro, OR^3, SR^3, and $N(R^3)_2$;

J is ~~selected from the group consisting of~~ CR^{20}~~, NR^{20}, O, and S~~;

K is ~~selected from the group consisting of~~ CR^{21}~~, NR^{21}, O, and S~~;

L is ~~selected from the group consisting of~~ CR^{22}~~, NR^{22}, O, and S~~;

M is ~~selected from the group consisting of~~ CR^{23}~~, NR^{23}, O, and S~~;

wherein:

R^{20}, R^{21}, and R^{22} are each independently selected from the group consisting of ~~null,~~ hydro, halo, optionally substituted C_{1-6}alkyl, C_{2-6}alkenyl, OCF_3, NO_2, CN, NC, $N(R^{25})_2$, OR^{25}, CO_2R^{25}, $C(O)N(R^{25})_2$,

$C(O)R^{25}$, $N(R^{24})COR^{25}$, $N(R^{24})C(O)OR^{25}$, $N(R^{25})C(O)OR^{25}$, $N(R^{25})C(O)C_{1-3}alkyleneC(O)R^{25}$, $N(R^{25})C(O)C_{1-3}alkylene-C(O)OR^{25}$, $N(R^{25})C(O)C_{1-3}alkyleneOR^{25}$, $N(R^{25})C(O)C_{1-3}alkyleneNHC(O)OR^{25}$, $N(R^{25})C(O)C_{1-3}alkyleneSO_2NR^{25}$, CF_3, $C_{1-3}alkyleneN(R^{25})SO_2aryl$, $C_{1-3}alkyleneN(R^{25})SO_2heteroaryl$, $C_{1-3}alkyleneOC_{1-3}alkylenearyl$, $C_{1-3}alkyleneN(R^{25})C_{1-3}alkylenearyl$, $C_{1-3}alkyleneN(R^{25})C_{1-3}alkyleneheteroaryl$, $C_{1-3}alkyleneN(R^{25})C(O)R^7$, $C_{1-3}alkyleneN(R^{25})C(O)C_{1-3}alkyleneOR^{25}$, $C_{1-3}alkyleneN(R^{25})C(O)aryl$, $C_{1-3}alkyleneN(R^{25})C(O)C_{1-3}alkyleneN(R^{25})2$, $C_{1-3}alkyleneN(R^{25})C(O)heteroaryl$, $C_{1-3}alkyleneOR^{25}$, and SR^{25};

R^{23} is selected from the group consisting of null, hydro, optionally substituted $C_{1-6}alkyl$, and halo;

R^{24} is selected from the group consisting of hydro, $C_{1-6}alkyl$, $C_{2-6}alkenyl$, $C_{2-6}alkynyl$, and aryl;

R^{25} is selected from the group consisting of hydro, $C_{1-6}alkyl$, $C_{2-6}alkenyl$, cycloalkyl, heterocycle, aryl, heteroaryl, SO_2R^{26}, and $C_{1-6}alkyl$ substituted with halo, hydroxy, aryl, heteroaryl, heterocycloalkyl, $N(R^{26})_2$, or SO_2R^{26}; and

R^{26} is selected from the group consisting of hydro, $C_{1-6}alkyl$, cycloalkyl, aryl, and $SO_2C_{1-6}alkyl$, or two R^4 groups are taken together to form an optionally substituted 3- to 6-membered ring.

11. (Currently amended) The method of claim 10 wherein W is ~~selected from the group consisting of pyridazinyl, pyrimidinyl, pyrazinyl, and triazinyl,~~ optionally substituted with from one to ~~four~~ three substituents selected from the group consisting of optionally substituted C_{1-6}alkyl, aryl, $N(R^3)_2$, OR^3, C_{1-3}alkylenearyl, C_{1-3}alkyleneheteroaryl, C_{1-3}alkylene-C_{3-8}heterocycloalkyl, C_{1-3}alkyleneSO_2aryl, optionally substituted C_{1-3}alkylene$N(R^4)_2$, OCF^3, C_{1-3}alkylene$N(R^4)_3^+$, C_{3-8}heterocycloalkyl, $CH(C_{1-3}alkyleneN(R^4)_2)_2$, and halo.

12. (Currently amended) The method of claim 10 wherein

J is ~~selected from the group consisting of~~ CR^{20} ~~and NR^{20}~~, wherein R^{20} is ~~null,~~ selected from the group consisting of hydro, optionally substituted C_{1-6}alkyl, and halo;

K is ~~selected from the group consisting of~~ CR^{21} ~~and NR^{21}~~;

L is ~~selected from the group consisting of~~ CR^{22} ~~and NR^{22}~~; and

one of R^{21} and R^{22} is hydro and the other is a substituent selected from the group consisting of CO_2R^{25}, $C(O)N(R^{25})_2$, $C(O)R^{25}$, $N(R^{24})COR^{25}$, $N(R^{24})C(O)OR^{25}$, $N(R^{25})C(O)OR^{25}$, $N(R^{25})C(O)C_{1-3}alkyleneC(O)R^{25}$, $N(R^{25})C(O)$-$C_{1-3}alkyleneC(O)OR^{25}$, $N(R^{25})C(O)C_{1-3}alkyleneOR^{25}$, $N(R^{25})$-$C(O)C_{1-3}alkyleneNHC(O)OR^{25}$, $N(R^{25})C(O)C_{1-3}alkyleneSO2NR^{25}$, $C_{1-3}alkyleneOR^{25}$, CF_3, $C_{1-3}alkyleneN(R^{25})SO_2aryl$, $C_{1-3}alk$-$yleneN(R^{25})SO_2heteroaryl$, $C_{1-3}alkyleneOC_{1-3}alkylenearyl$, $C_{1-3}alkyleneN(R^{25})C_{1-3}alkylenearyl$, $C_{1-3}alkyleneN(R^{25})$-$C_{1-3}alkyleneheteroaryl$, $C_{1-3}alkyleneN(R^{25})C(O)R^3$, $C_{1-3}alkyleneN(R^{25})C(O)C_{1-3}alkyleneOR^3$, $C_{1-3}alkylene$-$N(R^{25})C(O)aryl$, $C_{1-3}alkyleneN(R^{25})C(O)C_{1-3}alkyleneN(R^{25})_2$, $C_{1-3}alkyleneN(R^{25})C(O)heteroaryl$, and SR^{25}.

13. (Cancelled)

14. (Original) The method of claim 8 wherein the chemotherapeutic agent is selected from the group consisting of an alkylating agent, an antimetabolite, a hormone or antagonist thereof, a radioisotope, an antibody, and mixtures thereof.

15. (Original) The method of claim 8 wherein the radiotherapeutic agent is selected from the group consisting of gamma-radiation, X-ray radiation, ultraviolet light, visible light, infrared radiation, and microwave radiation.

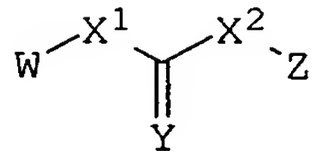
16. (Original) The method of claim 8 wherein the condition is a cancer selected from the group consisting of a colorectal cancer, a head and neck cancer, a pancreatic cancer, a breast cancer, a gastric cancer, a bladder cancer, a vulvar cancer, a leukemia, a lymphoma, a melanoma, a renal cell carcinoma, an ovarian cancer, a brain tumor, an osteosarcoma, and a lung carcinoma.

17. (Original) The method of claim 8 wherein the condition is a cancer selected from the group consisting of myxoid and round cell carcinoma, a locally advanced tumor, metastatic cancer, Ewing's sarcoma, a cancer metastase, a lymphatic metastase, squamous cell carcinoma, esophageal squamous cell carcinoma, oral carcinoma, multiple myeloma, acute lymphocytic leukemia, acute nonlymphocytic leukemia, chronic lymphocytic leukemia, chronic myelocytic leukemia, hairy cell leukemia, effusion lymphomas (body cavity based lymphomas), thymic lymphoma lung cancer, small cell carcinoma, cutaneous T cell lymphoma, Hodgkin's lymphoma, non-Hodgkin's lymphoma, cancer of the adrenal cortex, ACTH-producing tumors, nonsmall cell cancers, breast cancer, small cell carcinoma, ductal carcinoma, stomach cancer, colon cancer, colorectal cancer, polyps associated with colorectal neoplasia, pancreatic cancer, liver cancer, bladder cancer, primary superficial bladder tumors, invasive transitional cell carcinoma of the bladder, muscle-invasive bladder cancer, prostate cancer, ovarian carcinoma, primary peritoneal epithelial neoplasms, cervical carcinoma, uterine endometrial cancers, vaginal cancer, cancer of the vulva, uterine cancer and solid tumors in the ovarian follicle, testicular cancer, penile cancer, renal cell carcinoma, intrinsic brain tumors, neuroblastoma, astrocytic brain tumors, gliomas, metastatic tumor cell invasion in the central nervous system, osteomas and osteosarcomas, malignant melanoma, tumor progression of human skin keratinocytes, squamous cell cancer, thyroid cancer, retino-

blastoma, neuroblastoma, peritoneal effusion, malignant pleural effusion, mesothelioma, Wilms's tumors, gall bladder cancer, trophoblastic neoplasms, hemangiopericytoma, and Kaposi's sarcoma.

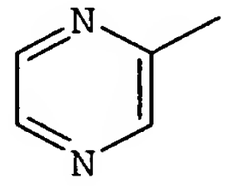
18. (Original) The method of claim 8 wherein the treatment is administered for an inflammatory condition selected from the group consisting of rheumatoid arthritis, psoriasis, vitiligo, Wegener's granulomatosis, and systemic lupus erythematosus.

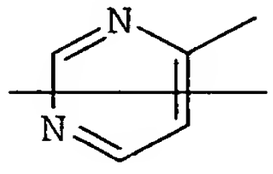
19. (Currently amended) A compound having a formula

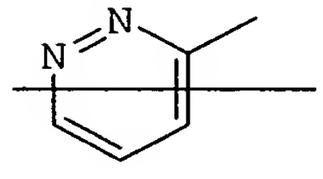


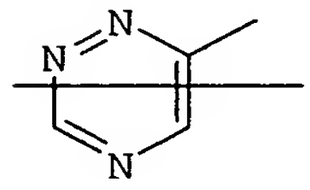
wherein Y' is O or S;

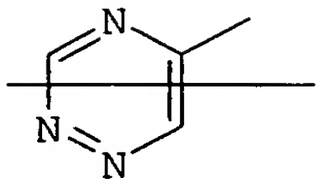
W' is ~~selected from the group consisting of~~

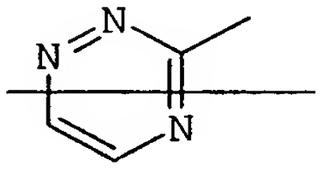


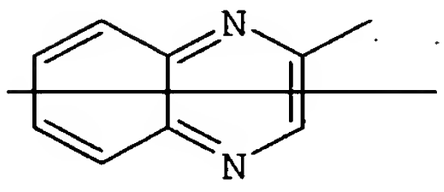




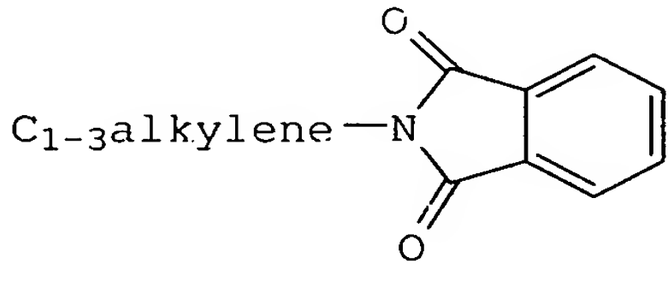






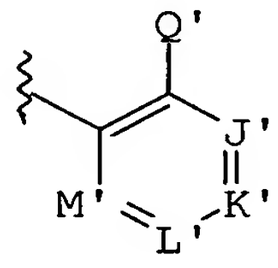


optionally substituted with from one to ~~four~~ three substituents selected from the group consisting of C_{1-6}alkyl, aryl, $N(R^7)_2$, OR^7, N_3, CN, $C(O)R^7$, C_{1-3}alkylenearyl, C_{1-3}alkylene$N(R^{12})_2$,

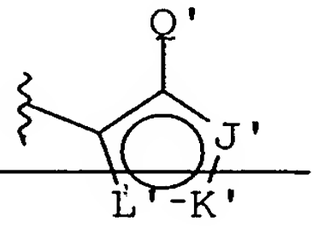


and halo;

Z' is ~~selected from the group consisting of~~:



~~and~~



;

wherein:

Q' is selected from the group consisting of ~~hydro,~~ OR^7, SR^7, and $N(R^7)_2$~~, with the proviso that Q' is hydro only when at least one of J', K', L', and M' is N, O, or S~~;

J' is ~~selected from the group consisting of~~ CR^8~~, NR^8, O, and S~~;

K' is ~~selected from the group consisting of~~ CR^9~~, NR^9, O, and S~~;

L' is ~~selected from the group consisting of~~ CR^{10}~~, NR^{10}, O, and S~~;

M' is ~~selected from the group consisting of~~ CR^{11}~~, NR^{11}, O, and S, with the proviso that Z is different from a pyridone~~;

wherein:

R^7, independently, is selected from the group consisting of hydro, C_{1-6}alkyl, C_{2-6}alkenyl, cycloalkyl, aryl, heteroaryl, SO_2R^{12}, C_{1-6}alkyl substituted with one or more of halo, hydroxy, aryl, heteroaryl, heterocycloalkyl, $N(R^{12})_2$, and SO_2R^{12}, C_{1-3}alkylenearyl, C_{1-3}alkyleneheteroaryl, C_{1-3}alkyleneC_{3-8}heterocycloalkyl, C_{1-3}alkyleneSO_2aryl, optionally substituted C_{1-3}alkylene-$N(R^{12})_2$, OCF_3, C_{1-3}alkylene$N(R^{12})_3^+$, C_{3-8}heterocycloalkyl, and $CH(C_{1-3}alkyleneN(R^{12})_2)_2$, or two R^7 groups are taken together to form an optionally substituted 3- to 6-membered aliphatic ring;

R^8, R^9, and R^{10} are each independently selected from the group consisting of ~~null,~~ hydro, halo, optionally substituted C_{1-6}alkyl, C_{2-6}alkenyl, OCF_3, NO_2, CN, NC, $N(R^7)_2$, OR^7, CO_2R^7, $C(O)N(R^7)_2$, $C(O)R^7$, $N(R^{13})$-COR^7, $N(R^{13})C(O)OR^7$, $N(R^7)C(O)OR^7$, $N(R^7)C(O)C_{1-3}$alkylene-

$C(O)R^7$, $N(R^7)C(O)C_{1-3}$alkyleneC(O)OR^7, $N(R^7)C(O)C_{1-3}$alkyleneOR^7, $N(R^7)C(O)C_{1-3}$alkyleneNHC(O)OR^7, $N(R^7)C(O)C_{1-3}$alkyleneSO_2NR^7, CF_3, C_{1-3}alkyleneN(R^{12})SO_2aryl, C_{1-3}alkyleneN(R^{12})SO_2heteroaryl, C_{1-3}alkyleneOC_{1-3}alkylenearyl, C_{1-3}alkyleneN(R^{12})C_{1-3}alkylenearyl, C_{1-3}alkyleneN(R^{12})-C_{1-3}alkyleneheteroaryl, C_{1-3}alkyleneN(R^{12})C(O)R^7, C_{1-3}alkyleneN(R^{12})C(O)C_{1-3}alkyleneOR_2, C_{1-3}alkyleneN(R^{12})-C(O)aryl, C_{1-3}alkyleneN(R^{12})C(O)C_{1-3}alkyleneN(R^{12})$_2$, C_{1-3}alkyleneN(R^{12})C(O)heteroaryl, C_{1-3}alkyleneOR^7, and SR^7, wherein R^7 is as defined above;

R^{11} is selected from the group consisting of ~~null,~~ hydro, optionally substituted C_{1-6}alkyl, and halo;

R^{12} is selected from the group consisting of hydro, C_{1-6}alkyl, cycloalkyl, aryl, heteroaryl, C_{1-3}alkylenearyl, and SO_2C_{1-6}alkyl, or two R^{12} groups are taken together to form an optionally substituted 3- to 6-membered ring; and

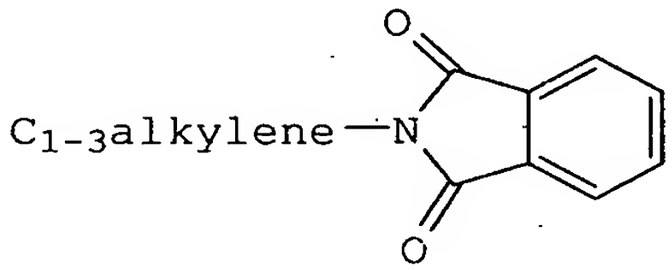
R^{13} is selected from the group consisting of hydro, C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, and aryl;

provided that when Q' is hydro or OCH_3, at least one of R^8, R^9, and R^{10} is different from hydro, CH_3, OCH_3, and halo,

~~and~~ or pharmaceutically acceptable salts, or prodrugs, or solvates thereof.

20. (Cancelled)

21. (Currently amended) The compound of claim ~~20~~ 19 wherein W' is substituted with one to ~~four~~ three substituents selected from the group consisting of methyl, CF_3, optionally substituted aryl, N_3, benzyl, $C(O)R^7$, C_{1-3}alkyleneN$(R^{12})_2$, OR^7, $N(R^7)_2$, halo, and



22. (Original) The compound of claim 19 wherein Q' is OR^7.

23. (Original) The compound of claim 22 wherein Q' is OCH_3.

24. (Original) The compound of claim 19 wherein R^{13} is hydro.

25. (Currently amended) The compound of claim 19 wherein

J' is ~~selected from the group consisting of~~ CR^8 ~~and NR^8~~, wherein R^8 is ~~null,~~ hydro, C_{1-6}alkyl, and halo;

K' is ~~selected from the group consisting of~~ CR^9 ~~and NR^9~~;

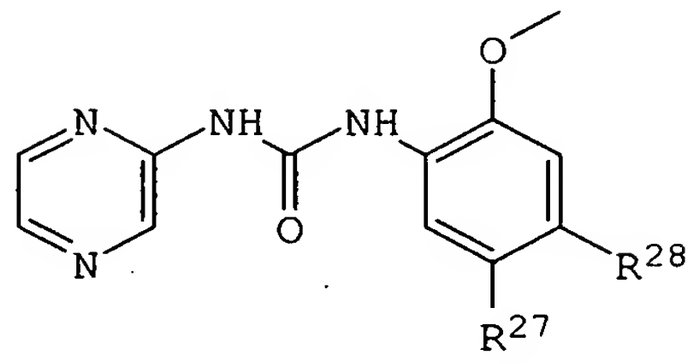
L' is ~~selected from the group consisting of~~ CR^{10} ~~and NR^{10}~~; and

one of R^9 and R^{10} is hydro and the other is a substituent selected from the group consisting of CO_2R^7, $C(O)N(R^7)_2$, $C(O)R^7$, $N(R^{13})COR^7$, $N(R^{13})C(O)OR^7$, $N(R^7)C(O)OR^7$, $N(R^7)C(O)C_{1-3}alkyleneC(O)R^7$, $N(R^7)C(O)$-$C_{1-3}alkyleneC(O)OR^7$, $N(R^7)C(O)C_{1-3}alkyleneOR^7$, $N(R^7)C$-$(O)C_{1-3}alkyleneNHC(O)OR^7$, $N(R^7)C(O)C_{1-3}alkyleneSO_2NR^7$, $C_{1-3}alkylene$-OR^7, CF_3, $C_{1-3}alkyleneN(R^{12})SO_2aryl$, $C_{1-3}alk$-$yleneN(R^{12})SO_2heteroaryl$, $C_{1-3}alkyleneOC_{1-3}alkylenearyl$, $C_{1-3}alkyleneN(R^{12})C_{1-3}alkylenearyl$, $C_{1-3}alkyleneN(R^{12})C_{1-3}$-$alkyleneheteroaryl$, $C_{1-3}alkyleneN(R^{12})C(O)R^7$, $C_{1-3}alkyl$-$eneN(R^{12})C(O)C_{1-3}alkyleneOR^2$, $C_{1-3}alkyleneN(R^{12})C(O)aryl$, $C_{1-3}alkyleneN(R^{12})C(O)C_{1-3}alkyleneN(R^{12})_2$, $C_{1-3}alkylene$-$N(R^{12})C(O)heteroaryl$, and SR^7.

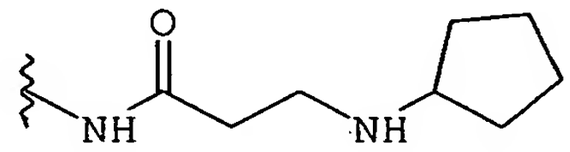
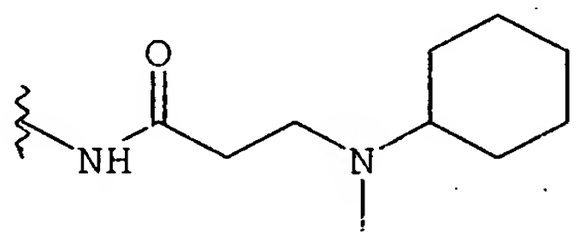
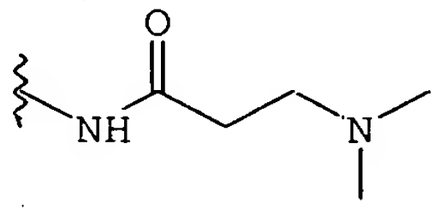
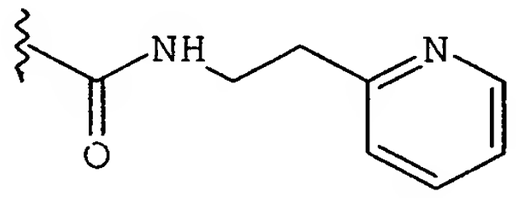
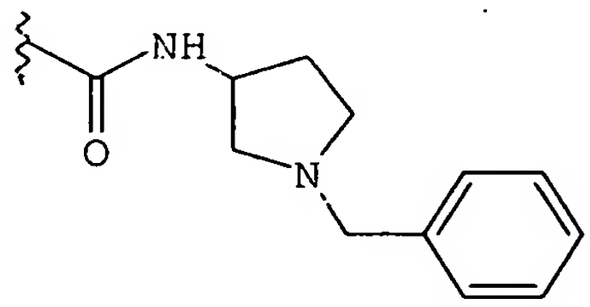
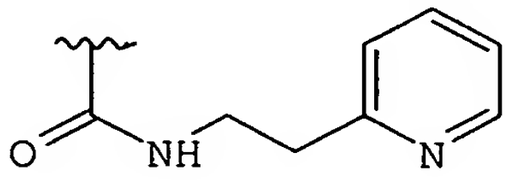
26. (Original) A method of inhibiting checkpoint kinase 1 (Chk1) in a cell comprising the step of contacting the cell with an effective amount of a compound of claim 19.

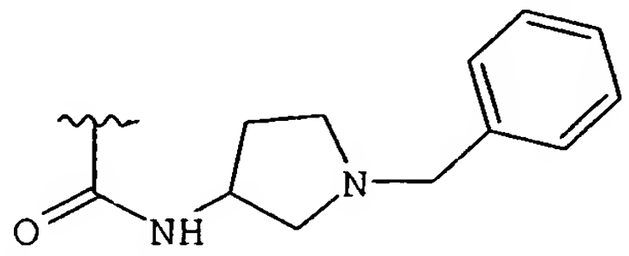
27. (Original) A method of sensitizing cells in an individual undergoing a chemotherapeutic or radiotherapeutic treatment for a medical condition, comprising administering a therapeutically effective amount of a compound of claim 19 in combination with a chemotherapeutic agent, a radiotherapeutic agent, or a mixture thereof to the individual.

28. (Currently amended) A compound having a structure

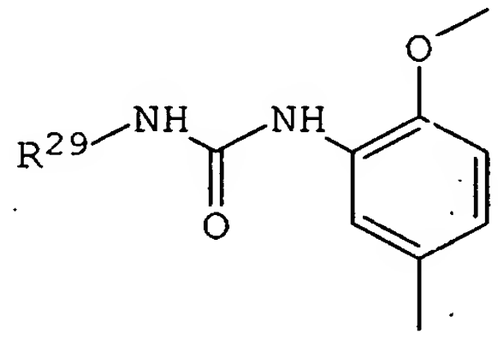


wherein R^{27} and R^{28} are

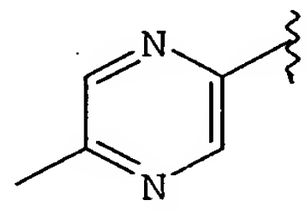
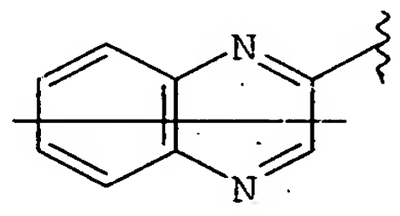
R^{27}	R^{28}
H	
H	
H	
CH_3	H
H	
H	
	H

R^{27}	R^{28}
	H

or



wherein R^{29} is

R^{29}



29. (Currently amended) A compound selected from the group consisting of:

N-(2-dimethylamino-1-phenyl-ethyl)-3-methoxy-4-[3-(5-methyl-pyrazin-2-yl)-ureido]-benzamine;

N-(1-aza-bicyclo[2.2.2]oct-3-yl)-3-methoxy-4-[3-(5-methyl-pyrazin-2-yl)-ureido]-benzamide;

N-(3-R-1-cyclohexylmethyl-pyrrolidin-3-yl)-3-methoxy-4-[3-(5-methyl-pyrazin-2-yl)-ureido]-benzamide;

1-[2-(2-dimethylamino-ethoxy)-5-methyl-phenyl]-3-pyrazin-2-yl-urea;

1-[2-(3-dimethylamino-propoxy)-5-methyl-phenyl]-3-(5-methyl-pyrazin-2-yl)-urea;

1-(5-methyl-pyrazin-2-yl)-3-[5-methyl-2-(pyridin-3-ylmethoxy)-phenyl]-urea;

1-[2-(2-dimethylamino-1-dimethylaminomethyl-ethoxy)-5-methyl-phenyl]-3-(5-methyl-pyrazin-2-yl)-urea;

1-[5-methyl-2-(2-S-1-methyl-pyrrolidin-2-ylmethoxy)-phenyl]-3-(5-methyl-pyrazin-2-yl)-urea;

1-{5-methyl-2-[2-(1-methyl-pyrrolidin-2-yl)-ethoxy]-phenyl}-3-(5-methyl-pyrazin-2-yl)-urea;

1-{5-methyl-2-(1-methyl-piperidin-4-yloxy)-phenyl]-3-(5-methyl-pyrazin-2-yl)-urea;

1-[5-methyl-2-(3-(S)-1-methyl-piperidin-3-ylmethoxy)-phenyl]-3-(5-methyl-pyrazin-2-yl)-urea;

1-[5-methyl-2-(3-(R)-1-methyl-piperidin-3-ylmethoxy)-phenyl]-3-(5-methyl-pyrazin-2-yl)-urea;

1-[5-methyl-2-(1-methyl-piperidin-2-ylmethoxy)-phenyl]-3-(5-methyl-pyrazin-2-yl)-urea;

1-[5-methyl-2-(1-methyl-piperidin-3-yloxy)-phenyl]-3-(5-methyl-pyrazin-2-yl)-urea;

~~1-[5-methyl-2-(1-methyl-piperidin-3-ylmethoxy)-phenyl]-3-quinoxalin-2-yl-urea;~~

1-[5-methyl-2-(piperidin-3-ylmethoxy)-phenyl]-3-(5-methyl-pyrazin-2-yl)-urea;

1-[5-fluoro-2-(1-methyl-piperidin-3-ylmethoxy)-phenyl]-3-(5-methyl-pyrazin-2-yl)-urea;

1-[5-fluoro-2-(1-methyl-piperidin-4-yloxy)-phenyl]-3-(5-methyl-pyrazin-2-yl)-urea;

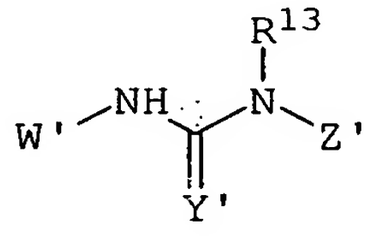
1-[4-fluoro-2-(1-methyl-piperidin-4-yloxy)-phenyl]-3-(5-methyl-pyrazin-2-yl)-urea;

1-(2-methoxy-4-methylaminomethyl-phenyl)-3-(5-methyl-pyrazin-2-yl)-urea;

1-(4-{[(furan-3-ylmethyl)-amino]-methyl}-2-methoxy-phenyl)-3-(5-methyl-pyrazin-2-yl)-urea; and

1-{2-methoxy-4-[(4-methoxy-benzylamino)-methyl]-phenyl}-3-(5-methyl-pyrazin-2-yl)-urea.

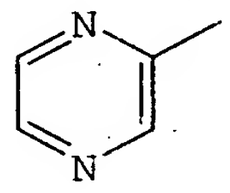
30. (Currently amended) A composition comprising a compound of formula (II) and a pharmaceutically acceptable carrier, said compound of formula (II) having a formula

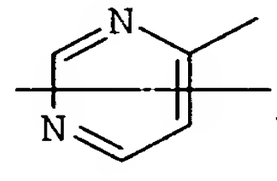


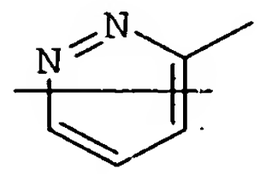
(II)

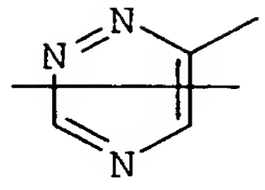
wherein Y' is O or S;

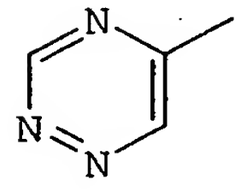
W' is ~~selected from the group consisting of~~

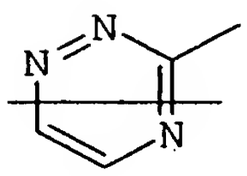




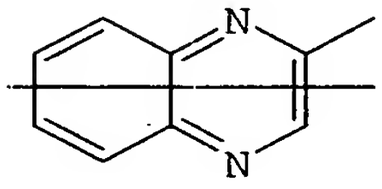




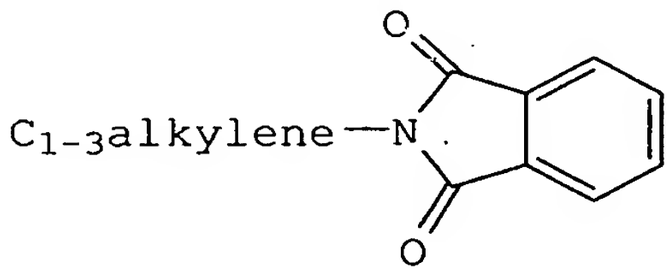




, and

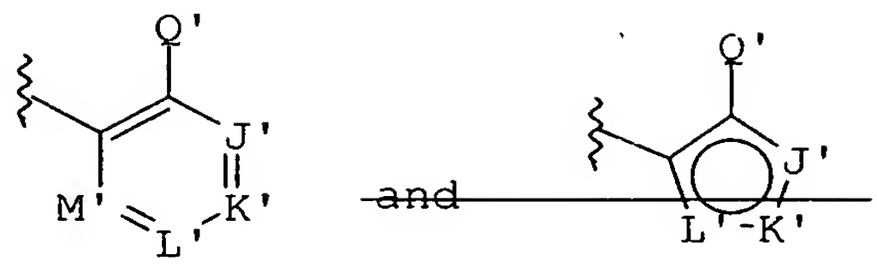


optionally substituted with from one to ~~four~~ three sub-stituents selected from the group consisting of C_{1-6}alkyl, aryl, $N(R^7)_2$, OR^7, N_3, CN, $C(O)R^7$, C_{1-3}alkylenearyl, C_{1-3}alkyleneN$(R^{12})_2$,



and halo;

Z' is ~~selected from the group consisting of:~~



;

wherein:

Q' is selected from the group consisting of ~~hydro,~~ OR^7, SR^7, and $N(R^7)_2$~~, with the proviso that Q' is hydro only when at least one of J', K', L', and M' is N, O, or S~~;

J' is ~~selected from the group consisting of~~ CR^8~~, NR^8, O, and S~~;

K' is ~~selected from the group consisting of~~ CR^9~~, NR^9, O, and S~~;

L' is ~~selected from the group consisting of~~ CR^{10}~~, NR^{10}, O, and S~~;

M' is ~~selected from the group consisting of~~ CR^{11}~~, NR^{11}, O, and S, with the proviso that Z is different from a pyridone~~;

wherein:

R^7, independently, is selected from the group consisting of hydro, C_{1-6}alkyl, C_{2-6}alkenyl, cycloalkyl, aryl, heteroaryl, SO_2R^{12}, C_{1-6}alkyl substituted with one or more of halo, hydroxy, aryl, heteroaryl, heterocycloalkyl, $N(R^{12})_2$, and SO_2R^{12}, C_{1-3}alkylenearyl, C_{1-3}alkyleneheteroaryl, C_{1-3}alkyleneC_{3-8}heterocycloalkyl, C_{1-3}alkyleneSO_2aryl, optionally substituted C_{1-3}alkylene-$N(R^{12})_2$, OCF_3, C_{1-3}alkylene$N(R^{12})_3^+$, C_{3-8}heterocycloalkyl, and $CH(C_{1-3}alkyleneN(R^{12})_2)_2$, or two R^7 groups are taken together to form an optionally substituted 3- to 6-membered aliphatic ring;

R^8, R^9, and R^{10} are each independently selected from the group consisting of ~~null,~~ hydro, halo, optionally substituted C_{1-6}alkyl, C_{2-6}alkenyl, OCF_3, NO_2, CN, NC, $N(R^7)_2$, OR^7, CO_2R^7, $C(O)N(R^7)_2$, $C(O)R^7$, $N(R^{13})$-COR^7, $N(R^{13})C(O)OR^7$, $N(R^7)C(O)OR^7$, $N(R^7)C(O)C_{1-3}$alkylene-$C(O)R^7$, $N(R^7)C(O)C_{1-3}$alkyleneC(O)OR^7, $N(R^7)C(O)C_{1-3}$alkyl-eneOR^7, $N(R^7)C(O)C_{1-3}$alkyleneNHC(O)OR^7, $N(R^7)C(O)C_{1-3}$alk-yleneSO_2NR^7, C_{1-3}alkyleneOR^7, and SR^7, wherein R^7 is as defined above;

R^{11} is selected from the group consisting of ~~null,~~ hydro, optionally substituted C_{1-6}alkyl, and halo;

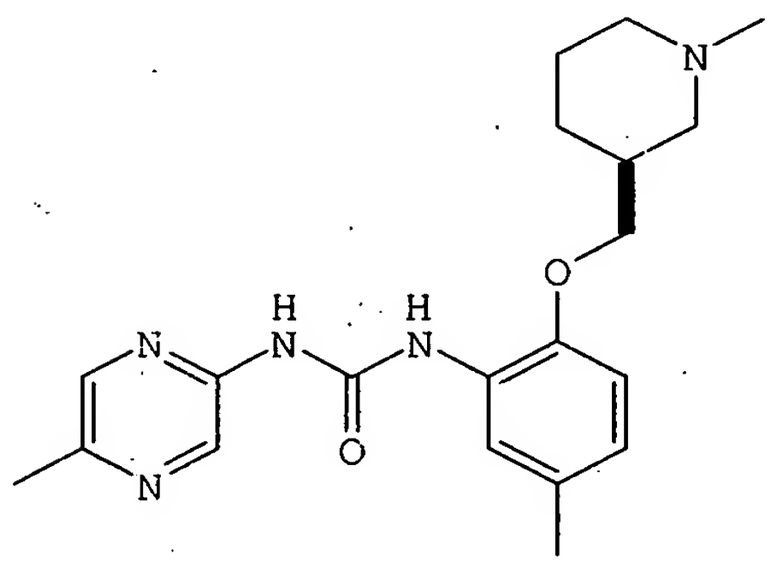
R^{12} is selected from the group consisting of hydro, C_{1-6}alkyl, cycloalkyl, aryl, heteroaryl, C_{1-3}alk-ylenearyl, and SO_2C_{1-6}alkyl, or two R^{12} groups are taken together to form an optionally substituted 3- to 6-membered ring; and

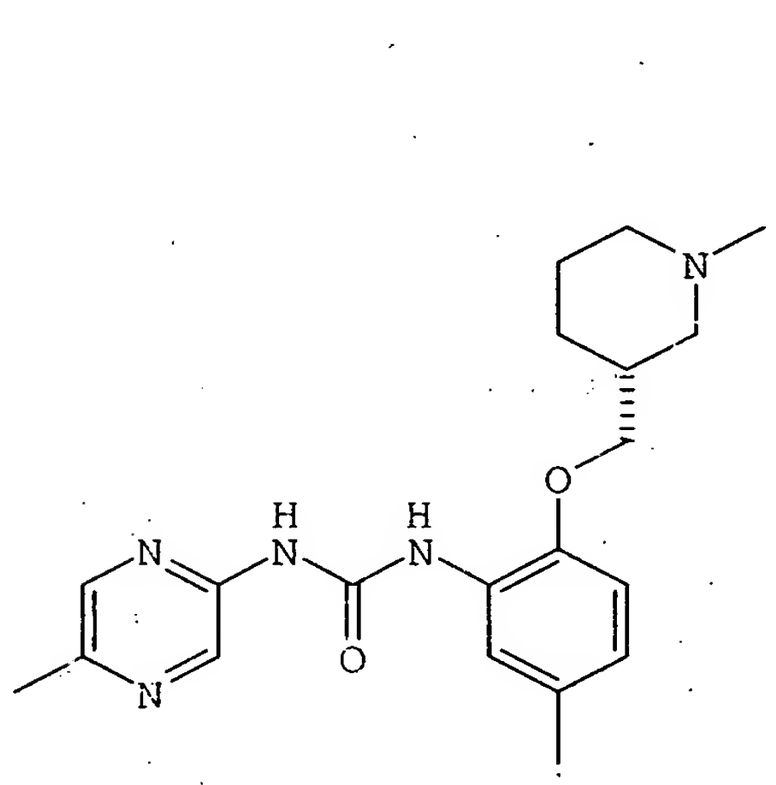
R^{13} is selected from the group consisting of hydro, C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, and aryl;

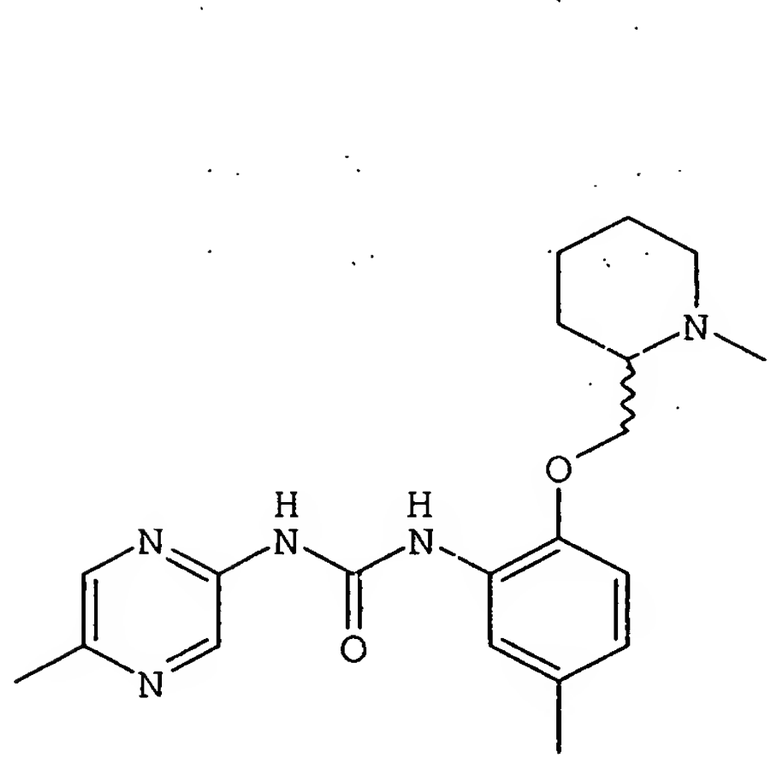
provided that when Q' is hydro or OCH_3, at least one of R^8, R^9, and R^{10} is different from hydro, CH_3, OCH_3, and halo,

~~and~~ or pharmaceutically acceptable salts, or prodrugs, or solvates thereof.

31. (Previously presented) A compound selected from the group consisting of







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